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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,847	03/09/2001	Seok- Il Yoon	12652-004001	6594

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EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/786,847	Applicant(s) YOON ET AL.	
	Examiner Tamra L. Dicus	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1774

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-7, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,612,723 to Futhey et al. in view of USPN 6,120,881 to Smith et al.

Futhey teaches a luminaire system having linear, triangular prisms that are retroreflective and the prisms are continuous as Applicant's recitation shown by Futhey in Figures 3, 4, 14-15, and 17. At col. 3, lines 60-68 teach the article having various different shapes. See further description at col. 4, lines 25-40, and col. 5, lines 15-20. Col 5, line 66 describes that prisms are tilted. Futhey does not teach a common point shared or the surface recitations as per instant claims 1, 5, and 6 or how triangles are placed as per instant claims 2, 5, and 9-11. Smith teaches retroreflective cube corner sheeting. The sheet comprises the surface and common, uncommon, apex, first and second base edges as per instant claim 1, at col. 3, lines 60-68, col. 4, lines 30-50 and col. 8, lines 6-16. The triangle placement is also provided by Smith as shown in Figures 8, 14-15, 20 and 21. It would have been obvious to one having ordinary skill in the art to include

Art Unit: 1774

edges like that of the instant claims to the luminaire system of Futhey because Smith teaches such structure is used to ensure optical quality surfaces at col. 4, lines 30-38.

Futhey does not teach a polyhedron axis per instant claim 12. Smith teaches at co. 8, lines 15-17, surfaces of lamina may include a right rectangular polyhedron where opposing surfaces are parallel, but does not have to be parallel. It would have been obvious to one of ordinary skill in the art to include a polyhedron optical axis to reflect light differently as suggested by Smith at col. 8, lines 15-17.

Claims 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,612,723 to Futhey et al. in view of USPN 6,120,881 to Smith et al. and further in view of USPN 5,946,134 to Benson et al.

Futhey is relied upon above. Futhey does not teach the index of refraction of 1.4-1.7 as instant claim 3 recites. Benson teaches a raised structure retroreflective article comprising transparent materials such as glass having an index of refraction of 1.5, meeting Applicant's range or 1.4-1.7. See col. 17, lines 60. It would have been obvious to include an index of refraction as recited in instant claim 3 to the luminaire system of Futhey because Benson provides the value of 1.5 is a common index for transparent substrates used in retroreflective sheeting.

Art Unit: 1774

Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Futhey does not teach the tilted degree range of -15 to 15 or a polyhedron optical axis and there is no motivation to combine the prior art to teach the instant invention.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,945,042 to Mimura et al. teaches a method for continuously forming an array of optical elements. USPN 4,243,618 to Van Arnim teaches a method for forming retroreflective sheeting. US 2002/0097496 to Lu teaches a light redirecting film. USPN 5,450,235 to Smith et al. teaches a flexible cube-corner retroreflective sheeting.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 1774

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 10, 2004

[tld]

CYNTHIA H. KELLY
SUPERVISOR
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